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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/408,873	09/29/1999	MAURITIUS SEEGER	D/99487	4555

7590 12/05/2003

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EXAMINER

MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/408,873

Applicant(s)

SEEGER ET AL.

Examiner

Justin P Misleh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 - 28 is/are allowed.
- 6) ☒ Claim(s) 1 - 24, 29, and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 – 17 and 21 - 24 have been considered but are moot in view of the new ground(s) of rejection.

2. Applicant's arguments with respect to claims 18 – 20, 29, and 30 have been fully considered but they are not persuasive.

3. To overcome Meyers, the Applicant included the following limitation in claims 18 and 29:

“wherein at least one lens of the plurality of cameras being adapted to shift relative to at least another lens of the plurality of camera to adjust the view it records of the area”.

4. The Applicant argues:

“while being compact, the lenslet array disclosed by Meyers is fixed and may not be adjustable as is the image acquisition system described and claimed by the Applicant.”

5. The Examiner disagrees with the Applicant on the basis of the interpretation of the above-cited newly added claim limitation (herein referred to as “the amendment”). The amendment does not limit the original claims 18 and 29 and certainly does not overcome Meyers. Presently amended claims 18 and 29 require that at least one lens of the plurality of cameras *being adapted to* shift relative to at least another lens in no way suggests action (or a required action) by any of the lenses or the cameras as suggested by

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the Applicant. Rather, *being adapted to* simply suggests that at some point in time prior to any particular instant at least one of the lenses of the plurality of cameras was placed in a shifted position relative to at least another one of the lenses to adjust the view it records. In other words, the amendment does not require that the lenses are in a state of movement nor does the amendment require that the lenses could be in a state of movement rather the amendment suggests that the lenses were in a state of movement (i.e. at the time of manufacture). Therefore, the lenses in Meyers are in a predetermined offset position relative to the other lenses thereby suggesting that they were adapted to shift relative to the other lenses. Granted, Meyers does not teach of current and future adjustable lenses, however, presently amended claims 18 and 29 do no more than simply clarify original claims 18 and 29 and do not require an adjustable lens. Thus, the rejection of claims 18 and 29 under 35 U.S.C § 102(e) as being anticipated by Meyers stands as shown below.

6. The Examiner accepts the Applicant's amendments to the specification. There are no further objections to the specification.

7. The Examiner accepts the Applicant's amendments to the drawings. There are no further objections to the drawings.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1, 2, 4, 6 – 13, 15 – 17, and 21 – 24** are rejected under 35 U.S.C. 102(e) as being anticipated by Kinjo.

For the following rejections, please refer to figure 1, 2A – 2D, and 6 and columns 2 (lines 63 – 67), 3 (lines 4 – 35), 5 (lines 18 – 32), and 6 (lines 34 – 54).

10. For **claim 1**, Kinjo discloses a camera system, comprising: a lens (22) positionable to a plurality of predetermined offset positions within a lens plane, the lens plane located substantially orthogonal to an optical axis of the lens; and an image sensor (25) having a relatively planar surface and operable to detect light rays originating from one or more objects within an area having a plurality of views (S1 – S4), wherein each view is recorded while the lens is positioned at a corresponding one of the predetermined offset positions (FS1 – FS4) to assemble a composite image of the views by patching the views together at regions of overlap (see figure 2D).

Kinjo teaches of a camera system that when in a high resolution divisional photography mode, a lens shifting device (23) moves the imaging lens (22) horizontally and/or vertically in a perpendicular plane to its optical axis so as to concentrate on one division after another. The photographic scene is divided into a number of divisions in a predetermined arrangement, so each division is photographed as a photographic field in a full size frame by use of the entire imaging surface of the image area sensor (25). As shown in figures 2A – 2D, a photographic scene (S) is divided into four divisions S1 – S4 and four frames FS1 – FS4 are sequentially photographed from the respective divisions. The image processing section (30) processes or composes the image data in accordance with the series of frames to make a high definition

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photographic image for display on a color monitor (33). To correct the border positions between the divisions S1 – S4, the image data of the frames FS1 – FS4 is subjected to conventional local pattern matching.

11. As for **claim 2**, Kinjo discloses, the camera system of claim 1, wherein the image sensor represents a CCD array sensor (25).

12. As for **claim 4**, although Kinjo does not explicitly teach, the camera system of claim 1, further comprising a light shield and a housing partially enclosing the image sensor, the light shield attached between the lens and the housing, it is inherent that a light shield exists and that a housing partially encloses the image sensor. If a housing, which partially encloses the image sensor, and if a light shield which is attached between the lens and the housing, did not exist, the camera system of Kinjo would be an inoperable system, by continuously saturating the image sensor and producing images not representative of the scene in which the user is attempting to capture.

13. As for **claim 6**, Kinjo discloses, as shown in figures 1 and 2A – 2D and as stated in column 3 (lines 25 – 32), the camera system of claim 1, further including a translation mechanism (lens shifting device 23) coupled to the lens (22) and operable to position the lens at the plurality of predetermined offset positions.

14. As for **claim 7**, Kinjo discloses, as shown in figure 1 and as stated in column the camera system of claim 6, wherein the translation mechanism (lens shifting device 23) includes one or more computer-controlled linear actuators (system controller 14 controls the camera system and thereby controls the lens shifting device 23) coupled to a translational stage. Since the lens (22) is shifted horizontally and/or vertically in a perpendicular plane to its optical axis, the shifting is

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linear and therefore the translation mechanism (23) includes a computer-controlled linear actuator. Also, although it is not shown, it is inherent that a translational stage is used for guiding the shifting of the lens (22) by the translation mechanism (23).

15. As for **claim 8**, Kinjo discloses, as stated in column 3 (lines 25 – 32), the camera system of claim 1, wherein the lens plane is positioned substantially parallel to the relatively planar surface of the image sensor.

16. For **claim 9**, Kinjo discloses, an image acquisition system, comprising: a camera system operable to record a plurality of camera images (FS1 – FS4) by shifting a camera lens (22) in plane substantially orthogonal (see column 3, lines 25 – 32) to an optical axis of the camera lens (22), wherein each camera image (FS1 – FS4) represents one of a plurality of views (S1 – S4) of an area (S), the area (S) includes one or more objects (human and hills; see figures 2A – 2D); and an image processing system (30) coupled to the camera system and operable to combine the plurality of camera images to produce a composite image of the area by patching the plurality of camera images together at regions of overlap (see column 6, lines 44 – 49).

Kinjo teaches of a camera system that when in a high resolution divisional photography mode, a lens shifting device (23) moves the imaging lens (22) horizontally and/or vertically in a perpendicular plane to its optical axis so as to concentrate on one division after another. The photographic scene is divided into a number of divisions in a predetermined arrangement, so each division is photographed as a photographic field in a full size frame by use of the entire imaging surface of the image area sensor (25). As shown in figures 2A – 2D, a photographic scene (S) is divided into four divisions S1 – S4 and four frames FS1 – FS4 are sequentially photographed from the respective divisions. The image processing section (30) processes or

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composes the image data in accordance with the series of frames to make a high definition photographic image for display on a color monitor (33). To correct the border positions between the divisions S1 – S4, the image data of the frames FS1 – FS4 is subjected to conventional local pattern matching.

17. As for **claim 10**, Kinjo discloses, as shown in figures 2A – 2D, a photographic scene (S) is divided into four divisions S1 – S4 and four frames FS1 – FS4 are sequentially photographed from the respective divisions. The image processing section (30) processes or composes the image data in accordance with the series of frames to make a high definition photographic image for display on a color monitor (33). Therefore, Kinjo discloses the image acquisition of claim 9, further comprising a display device (33) coupled to the image processing system (30) operable to display the composite image, wherein the composite image has a higher resolution than the resolution of the camera images (FS1 – FS4).

18. As for **claim 11**, Kinjo discloses, the image acquisition system of claim 10, wherein the camera lens (22) is positionable within a plane to a plurality of offset positions, and wherein an image sensor (25) is operable to detect light rays originating from one of the plurality of views (S1 – S4) when the camera lens (22) is positioned at a corresponding one of the plurality of offset positions (see figure 2A – 2D).

19. As for **claim 12**, although Kinjo does not explicitly teach, the image acquisition system of claim 11, further includes a light shield and a housing partially enclosing the image sensor, the light shield attached between the lens and the housing, it is inherent that a light shield exists and that a housing partially encloses the image sensor. If a housing, which partially encloses the image sensor, and if a light shield which is attached between the lens and the housing, did not

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exist, the camera system of Kinjo would be an inoperable system, by continuously saturating the image sensor and producing images not representative of the scene in which the user is attempting to capture.

20. As for **claim 13**, Kinjo discloses, the image acquisition system of claim 12, wherein the camera system includes one or more video cameras. Kinjo teaches of an image area sensor (25) capturing a series of still images, hence video, therefore, Kinjo teach of one video camera.

21. As for **claim 15**, Kinjo discloses, as shown in figures 1 and 2A – 2D and as stated in column 3 (lines 25 – 32), the image acquisition system of claim 9, further including a translation mechanism (lens shifting device 23) coupled to the camera lens (22) and operable to position the camera system to record the plurality of views (S1 – S4) of the area (S).

22. As for **claim 16**, Kinjo discloses, as shown in figures 2A – 2D, a photographic scene (S) is divided into four divisions S1 – S4 and four frames FS1 – FS4 are sequentially photographed from the respective divisions. The image processing section (30) processes or composes the image data in accordance with the series of frames to make a high definition photographic image for display on a color monitor (33). Thus, Kinjo discloses the image acquisition system of claim 15, wherein the camera system successively records the plurality of camera images.

23. As for **claim 17**, Kinjo discloses, as stated in column 3 (lines 25 – 32), the image acquisition system of claim 9, wherein the camera lens (22) is positioned in a plane substantially parallel an image sensor (25). Kinjo teaches of a camera system that when in a high resolution divisional photography mode, a lens shifting device (23) moves the imaging lens (22) horizontally and/or vertically in a perpendicular plane to its optical axis so as to concentrate on one division after another.

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24. For **claim 21**, Kinjo discloses, as shown in figures 1 and 2A – 2D and as stated in column 3 (lines 11 – 35), a method of scanning with a camera system, comprising the steps of:

(a) recording a first view (S1) of an area (S) having one or more objects (human and hills) while a lens (22) is positioned at a first position within a plane substantially orthogonal to an optical axis of the lens (22);

(b) recording a second view (S2) of the area (S) while the lens (22) is positioned at a second position within the plane; and

(c) combining all recorded views to produce a composite image having a higher resolution than the resolution of one or more of the recorded views (see column 5, lines 19 – 32).

Kinjo teaches of a camera system that when in a high resolution divisional photography mode, a lens shifting device (23) moves the imaging lens (22) horizontally and/or vertically in a perpendicular plane to its optical axis so as to concentrate on one division after another. The photographic scene is divided into a number of divisions in a predetermined arrangement, so each division is photographed as a photographic field in a full size frame by use of the entire imaging surface of the image area sensor (25). As shown in figures 2A – 2D, a photographic scene (S) is divided into four divisions S1 – S4 and four frames FS1 – FS4 are sequentially photographed from the respective divisions. The image processing section (30) processes or composes the image data in accordance with the series of frames to make a high definition photographic image for display on a color monitor (33). To correct the border positions between the divisions S1 – S4, the image data of the frames FS1 – FS4 is subjected to conventional local pattern matching.

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25. As for **claim 22**, Kinjo discloses, the method of claim 21, further comprising between step (b) and step (c), the step of:

(d) recording a next view (S3) of the area while the lens is positioned at a next position.

Kinjo teaches the recording of four distinct views wherein each view comes from the lens (22) in a distinct offset position to record each of the first, second, third, and fourth views.

26. As for **claim 23**, Kinjo discloses, the method of claim 22, further comprising the step of:

(e) repeating step (d) until all views (S1 – S4) of the area (S) have been recorded. Kinjo teaches the recording of four distinct views wherein each view comes from the lens (22) in a distinct offset position to record each of the first, second, third, and fourth views. The final image is then obtained from the four images previously acquired by composing the four views to form a high-resolution image.

27. As for **claim 24**, Kinjo discloses, the method of claim 21, wherein step (c) included the step of mosaicing all recorded views of the area. As stated in column 6 (lines 34 – 54), Kinjo teaches the recording of four distinct views wherein each view comes from the lens (22) in a distinct offset position to record each of the first, second, third, and fourth views. The final image is then obtained from the four images previously acquired by composing the four views to form a high-resolution image.

28. **Claims 18 – 20, 29, and 30** are rejected under 35 U.S.C. 102(e) as being anticipated by Meyers.

29. For **claim 18**, Meyers discloses, as shown in figures 1A, 1B, 2, and 9 and as stated in columns 3 (lines 46 – 55), 4 (lines 26 – 62), 5 (lines 31 – 67), 6 (lines 1 – 27), and 13 (lines 5 – 61), an image acquisition system, comprising: a plurality of cameras (each sub-group of

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photodetectors 22) operable to record an area having multiple views, the area includes one or more objects, wherein each camera is operable to record at least one of the views to produce one or more camera images, wherein at least one of the cameras has an offset lens (see figure 2; lenslet 12) to produce an oblique field of view; and an image processing system (located on chip0 coupled to the plurality of cameras and operable to combine the plurality of camera images to produce a composite image; wherein at least one lens of the plurality of cameras being adapted to shift relative to at least another lens of the plurality of camera to adjust the view it records of the area.

Meyers teaches of a multiple camera system, in which each camera is defined as a sub-group of photodetectors of the entire array of photodetectors. Each sub-group of photodetectors, as stated in column 5 (lines 31 – 42), is provided with associated electronics containing multiplexing, clocking circuits, current mirrors, correlated double sampling, an analog-to-digital converter, and a non-volatile memory cell. As shown in figures 1A and 2, each camera has its own lens (lenslet 12) wherein at least one of the cameras has an offset lens (14). The sub-images from each camera (sub-group of photodetectors) are stitched with the other sub-images to form a composite image with high-resolution.

In addition to the explanation provided in the *Response to Arguments* section of this Office Action, since each lens corresponding to each camera is in a permanent predetermined offset position, the lenses are already adapted to shift (i.e. they have been shifted) relative to at least another lens of the plurality of camera to adjust the view it records.

30. As for **claim 19**, Meyers discloses, the image acquisition system of claim 18, wherein all camera images are recorded simultaneously.

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31. As for **claim 20**, Meyers discloses, as stated in column 13 (lines 24 – 34), the image acquisition system of claim 18, wherein the image processing system is operable to produce the composite image by mosaicing the camera images.

32. For **claim 29**, Meyers discloses, as shown in figures 1A, 1B, 2, and 9 and as stated in columns 3 (lines 46 – 55), 4 (lines 26 – 62), 5 (lines 31 – 67), 6 (lines 1 – 27), and 13 (lines 5 – 61), a method of scanning with a camera system having a plurality of cameras, comprising the steps of:

(a) recording a plurality of views of an area having one or more objects with a plurality of cameras (each sub-group of photodetectors 22), each camera having a lens (lenslet 12 of lenslet array 10) positioned within a plane substantially orthogonal to an optical axis of the lens (see figure 2), and wherein one or more cameras has offset lens (14); and

(b) combining all recorded views to produce a composite image having a higher resolution than the resolution of one or more of the recorded views (see column 6, lines 19 – 23).

Meyers teach of a multiple camera system, in which each camera is defined as a sub-group of photodetectors of the entire array of photodetectors. Each sub-group of photodetectors, as stated in column 5 (lines 31 – 42), is provided with associated electronics containing multiplexing, clocking circuits, current mirrors, correlated double sampling, an analog-to-digital converter, and a non-volatile memory cell. As shown in figures 1A and 2, each camera has its own lens (lenslet 12) wherein at least one of the cameras has an offset lens (14). The sub-images from each camera (sub-group of photodetectors) are stitched with the other sub-images to form a composite image with high-resolution.

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In addition to the explanation provided in the *Response to Arguments* section of this Office Action, since each lens corresponding to each camera is in a permanent predetermined offset position, the lenses are already adapted to shift (i.e. they have been shifted) relative to at least another lens of the plurality of camera to adjust the view it records.

33. As for **claim 30**, Meyers discloses, as stated in column 13 (lines 24 – 34), the method of claim 29, wherein step (c) includes the step of mosaicing all recorded views of the area.

Claim Rejections - 35 USC § 103

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35. **Claims 3, 5, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinjo.

36. As for **claim 3**, Kinjo teaches of a camera system that when in a high resolution divisional photography mode, a lens shifting device (23) moves the imaging lens (22) horizontally and/or vertically in a perpendicular plane to its optical axis so as to concentrate on one division after another wherein the photographic scene is divided into a number of divisions in a predetermined arrangement, so each division is photographed as a photographic field in a full size frame by use of the entire imaging surface of the image area sensor (25).

However, Kinjo does not disclose wherein the image sensor represents a CCD linear sensor. Although, Kinjo does not disclose a CCD linear sensor, as stated in column 3 (lines 23

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and 24), at the time the invention was made, one with ordinary skill in the art would have been motivated to use a CCD linear sensor rather than a CCD array sensor since the final image is composed after the lens has been shifted to a plurality of predetermined positions to encompass the entire field of view in which the user is trying to capture. Therefore, incorporating a CCD linear sensor rather than a CCD array sensor would be easily accomplished by varying the plurality of predetermined lens shifting position. Thus, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to use a CCD linear sensor rather than a CCD array sensor.

37. As for **claim 5**, it is inherent that a light shield exists and that a housing partially encloses the image sensor. Since it is inherent that a light shield and housing exists, Kinjo does not disclose wherein the light shield is a bellows. However, Official Notice is taken that both the concepts and the advantages of using a bellows as a light shield are well known and expected in the art. It would have been obvious to use a bellows type light shield as the light shield as means to provide a light shield which is flexible and pliable so as to move in conjunction with the lens and its shifted positions rather than a rigid light shield preventing the lens from shifting.

38. As for **claim 14**, Kinjo teaches of an image acquisition system that when in a high resolution divisional photography mode, a lens shifting device (23) moves the imaging lens (22) horizontally and/or vertically in a perpendicular plane to its optical axis so as to concentrate on one division after another wherein the photographic scene is divided into a number of divisions in a predetermined arrangement, so each division is photographed as a photographic field in a full size frame by use of the entire imaging surface of the image area sensor (25).

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However, Kinjo does not disclose wherein the camera system includes one or more line-scan cameras. Although, Kinjo does not disclose line-scan camera, as stated in column 3 (lines 23 and 24), at the time the invention was made, one with ordinary skill in the art would have been motivated to use a line-scan camera rather than an area camera since the final image is composed after the lens has been shifted to a plurality of predetermined positions to encompass the entire field of view in which the user is trying to capture. Therefore, incorporating a line-scan camera rather than an area camera would be easily accomplished by varying the plurality of predetermined lens shifting position. Thus, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to use a line-scan camera rather than an area camera.

Allowable Subject Matter

39. **Claims 25 – 28** are allowed.

40. The following is a statement of reasons for the indication of allowable subject matter:

For claims 25- 28, the prior art does not teach or fairly suggest a method of scanning with a camera, with a lens in an offset position within a plane substantially orthogonal to an optical axis, recording a first view while the camera is in a first position, rotating the camera to a second position to record a second view while the lens is in the said offset position.

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Conclusion

41. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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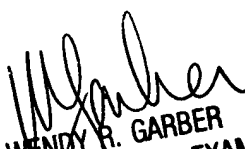
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin P Misleh whose telephone number is 703.305.8090. The examiner can normally be reached on Monday - Thursday from 7:30 am to 5:30 pm and on alternating Fridays from 7:30 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on 703.305.4929. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703.306.0377.

JPM

November 20, 2003


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600